



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF34-10E5      BYPASS RATIO: 5.1  
 UNIQUE ID NUMBER: 8GE115      PRESSURE RATIO ( $\pi_{00}$ ): 25.6  
 COMBUSTOR: SAC  
 ENGINE TYPE: TF      RATED THRUST ( $F_{00}$ ) (kN): 77.4

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	13.8	107.9	43.0	5.8
AS % OF ORIGINAL LIMIT	70.2	91.4	47.2	22.9
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			59.0	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			69.0	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			76.1	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			88.4	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: 2007 )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.792	0.04	0.43	18.51	4.5
CLIMB OUT	85	2.2	0.659	0.06	0.38	15.62	1.9
APPROACH	30	4.0	0.227	0.09	4.18	7.76	0.4
IDLE	7	26.0	0.085	5.15	49.40	3.59	0.8
LTO TOTAL FUEL (kg) or EMISSIONS (g)			307	692	6798	2871	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				8.9	87.9	37.1	4.5
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				8.4-9.3	84.9-89.7	36.6-37.7	3.7-5.6

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT All POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT All POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.4-98.6
TEMPERATURE (K)	294-295
ABS HUMIDITY (kg/kg)	0.00922-0.01192

### FUEL

SPEC	Jet A-1
H/C	1.92-1.93
AROM (%)	18.1-19.3

MANUFACTURER: General Electric Company  
 TEST ORGANIZATION: Peebles Test Operation  
 TEST LOCATION: Site 4D  
 TEST DATES: 24/07/2004-25/07/2004

### REMARKS

1. GE Reports R2004AE636 and R2006AE173
2. Block 1 Engines
3. Engine 994-110/1

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)